

1. A variable frequency oscillator comprising:

a variable capacitance unit, the capacitance of which is variable for varying the frequency of the output; and

2. A variable oscillator as claimed in claim 1, wherein the trimming capacitances are each selectively connectable between the first node and the second node.

3. A variable oscillator as claimed in claim 1, wherein the trimming capacitances are each selectively connectable in parallel with each other.

4. A variable oscillator as claimed in claim 1, wherein a switch is connected in series with each trimming capacitance between the first node and the second node for selectively connecting the respective trimming capacitance between the first node and the second node in response to a respective switching signal.

5. A variable oscillator as claimed in claim 4, wherein each switch is a switching transistor.

6. A variable oscillator as claimed in claim 1, comprising control apparatus for causing a set of the trimming capacitances to be connected between the first node and the second node.

7. A variable oscillator as claimed in claim 6, wherein the control apparatus is capable of generating the said switching signals.

8. A variable oscillator as claimed in claim 6, comprising a memory coupled to the control apparatus for storing information defining one or more sets of the trimming capacitances.

9. A variable oscillator as claimed in claim 8, wherein each of the said one or more sets corresponds to a respective operating frequency of the oscillator.

10. A variable oscillator as claimed in claim 8, wherein the control apparatus is capable of retrieving from the memory information defining a set of the trimming capacitances and causing that set of the trimming capacitances to be connected between the first node and the second node.

11. A variable oscillator as claimed in claim 1, wherein at least one of the trimming capacitances has a different capacitance value from another of the trimming capacitances.

12. A variable oscillator as claimed in claim 1, wherein the capacitance of the variable capacitance unit is variable by means of the voltage applied to a variable capacitance input.

13. A variable oscillator as claimed in claim 12, comprising feedback apparatus connected between the output and the variable capacitance input for stabilising the oscillator.

14. A variable oscillator as claimed in claim 13, wherein the feedback apparatus is a phase-locked loop.

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15. A variable oscillator as claimed in claim 1, wherein the variable capacitance unit is a variable capacitance diode.

16. A radio terminal comprising a variable oscillator as claimed in claim 1.

17. A method for operating a variable frequency oscillator as claimed in claim 12, the method comprising:

retrieving from the memory information defining a set of the trimming capacitances;

connecting that set of the trimming capacitances between the first node and the second node;

comparing the voltage at the variable capacitance input with a first preset voltage range; and

if that voltage is outside the first preset voltage range determining, based on the voltage at the variable capacitance input, an adjusted set of the trimming capacitances and storing in the memory information defining that adjusted set of the trimming capacitances.

18. A method as claimed in claim 17, wherein the said step of determining is performed only if the voltage at the variable capacitance input is inside a second preset voltage range.

19. A method as claimed in claim 17, wherein, in the step of storing, the information defining the adjusted set of the trimming capacitances is stored so as to replace in the memory the said information defining a set of the trimming capacitances.

20. A variable frequency oscillator comprising:

an oscillatory circuit for generating a periodic output dependant on the capacitance between a first node and a second node of the circuit, and having a capacitive element connected between the first node and the second node;

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the capacitative element comprising:

a variable capacitance unit, the capacitance of which is variable for continuously varying the frequency of the output over a frequency range; and

a plurality of trimming capacitances each being selectively connectable in series with the variable capacitance unit to trim the frequency of the output in steps of less than half the width of the said frequency range.

21. A variable oscillator as claimed in claim 20, wherein the variable capacitance unit is connected between the first node and an intermediate node, and the trimming capacitances are each selectively connectable in series with the variable capacitance unit between the intermediate node and the second node.

22. A variable oscillator as claimed in claim 20, wherein the trimming capacitances are each selectively connectable in parallel with each other.

23. A variable oscillator as claimed in claim 20, wherein a switch is connected in series with each trimming capacitance between the intermediate node and the second node for selectively connecting the respective trimming capacitance between the intermediate node and the second node in response to a respective switching signal.

24. A variable oscillator as claimed in claim 23, wherein each switch is a switching transistor.

25. A variable oscillator as claimed in claim 20, comprising control apparatus for causing a set of the trimming capacitances to be connected between the first node and the second node.

26. A variable oscillator as claimed in claim 25, wherein the control apparatus is capable of generating the said switching signals.

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27. A variable oscillator as claimed in claim 25, comprising a memory coupled to the control apparatus for storing information defining one or more sets of the trimming capacitances.

28. A variable oscillator as claimed in claim 27, wherein each of the said one or more sets corresponds to a respective operating frequency of the oscillator.

sub-a1) 29. A variable oscillator as claimed in claim 27, wherein the control apparatus is capable of retrieving from the memory information defining a set of the trimming capacitances and causing that set of the trimming capacitances to be connected between the first node and the second node.

30. A variable oscillator as claimed in claim 20, wherein at least one of the trimming capacitances has a different capacitance value from another of the trimming capacitances.

31. A variable oscillator as claimed in claim 20, wherein the capacitance of the variable capacitance unit is variable by means of the voltage applied to a variable capacitance input.

32. A variable oscillator as claimed in claim 31, comprising feedback apparatus connected between the output and the variable capacitance input for stabilising the oscillator.

33. A variable oscillator as claimed in claim 32, wherein the feedback apparatus is a phase-locked loop.

34. A variable oscillator as claimed in claim 20, wherein the variable capacitance unit is a variable capacitance diode.

35. A radio terminal comprising a variable oscillator as claimed in claim 20.

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36. A method for operating a variable frequency oscillator as claimed in claim 31, the method comprising:

retrieving from the memory information defining a set of the trimming capacitances;

connecting that set of the trimming capacitances between the first node and the second node;

comparing the voltage at the variable capacitance input with a first preset voltage range; and

if that voltage is outside the first preset voltage range determining, based on the voltage at the variable capacitance input, an adjusted set of the trimming capacitances and storing in the memory information defining that adjusted set of the trimming capacitances.

37. A method as claimed in claim 36, wherein the said step of determining is performed only if the voltage at the variable capacitance input is inside a second preset voltage range.

38. A method as claimed in claim 36, wherein, in the step of storing, the information defining the adjusted set of the trimming capacitances is stored so as to replace in the memory the said information defining a set of the trimming capacitances.

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